

**IN THE CLAIMS:**

Claims 1-6, 8, 12 and 14-20 are pending in this application. Please cancel claims 7 and 13 without prejudice or disclaimer, and amend the remaining claims as follows:

1. (Currently Amended) An automatic teller machine (ATM) electronically connected to one or more devices, the one or more devices comprising:

a deposit device configured to receive an initial bank note and a bank note substantially the same as the initial bank note that has been identified as a counterfeit bank note at an external station;

an image extraction device configured to extract one or more ~~initial~~ images from the initial bank note and from the counterfeit bank note;

a transaction log device configured to attach a transaction log to the one or more ~~initial~~ images, ~~wherein the deposit device is further configured to receive a subsequent bank note, wherein the image extraction device is further configured to extract one or more subsequent images from the subsequent bank note;~~ [[and]]

a comparison device configured to compare the one or ~~more initial~~ images of the initial bank note to the one or more ~~subsequent~~ images of the counterfeit bank note in order to obtain a comparison result; and

a retrieval device for tracing the counterfeit bank note, which is configured to retrieve the transaction log attached to the initial bank note, if the comparison device determines that the one or more initial images of the initial bank note and the one or more images of the counterfeit bank note are within the range of similarity.

2. (Currently Amended) The automatic teller machine of Claim 1, the one or more devices further comprising at least one of:

a storage device configured to store the one or more initial images of the initial bank note, the one or more images of the counterfeit bank note and the transaction log; and

a network link to an external storage device configured to store the one or more initial images of the initial bank note, the one or more images of the counterfeit bank note and the transaction log.

3. (Currently Amended) The automatic teller machine of Claim 1, wherein the comparison device is further configured to determine if the one or more initial images of the initial bank note are within a range of similarity to the one or more ~~subsequent~~ images of the counterfeit bank note.
4. (Currently Amended) The automatic teller machine of Claim 1, wherein the image extraction device is further configured to:
  - extract a front side initial image of the initial bank note in a first initial position;
  - extract a front side initial image of the initial bank note in a second initial position;
  - extract a back side initial image of the initial bank note in a first initial position;
  - and
  - extract a back side initial image of the initial bank note in a second initial position.
5. (Currently Amended) The automatic teller machine of Claim 4, wherein the image extraction device is further configured to:
  - extract a front side ~~subsequent~~ image of the counterfeit bank note in a first ~~subsequent~~ position;
  - extract a front side ~~subsequent~~ image of the counterfeit bank note in a second ~~subsequent~~ position;
  - extract a back side ~~subsequent~~ image of the counterfeit bank note in a first ~~subsequent~~ position; and
  - extract a back side ~~subsequent~~ image of the counterfeit bank note in a second ~~subsequent~~ position.
6. (Currently Amended) The automatic teller machine of Claim 5, wherein the comparison device is further configured to compare each ~~subsequent~~ image of the counterfeit bank note in each ~~subsequent~~ position a plurality of times to a corresponding initial image of the initial bank note.

7. (Canceled).
8. (Currently Amended) The automatic teller machine of Claim 3, wherein the comparison device is further configured to analyze image characteristics using a Euclid distance formula, and further configured to determine whether the one or more initial images of the initial bank note and the one or more ~~subsequent~~ images of the counterfeit bank note have a Euclid distance near zero, wherein the range of similarity includes having a Euclid distance near zero.
9. (Withdrawn) An interface to an automatic teller machine (ATM) of a bank, the interface having one or more screens configured to be displayed on a display of the automatic teller machine, the one or more screens comprising:
  - a tracing mode, wherein use of the tracing mode requires special authorization by the bank;
  - a kind option of the tracing mode, wherein the kind option is configured to be selected and to initiate instructions to display a request to input a subsequent bank note of a particular kind;
  - a start search option of the tracing mode, wherein the start search option is configured to be selected and to initiate instructions to begin a comparison between subsequent images of the subsequent bank note and initial images of an initial bank note; and
  - a comparison results screen of the tracing mode, wherein the comparison results screen is configured to display comparison results upon completion of the comparison.
10. (Withdrawn) The interface of Claim 9, wherein the kind option is further configured to display a request to input the subsequent bank note in a particular direction a plurality of different times.
11. (Withdrawn) The interface of Claim 9, wherein the tracing mode option, the kind option, and the start search option are each electronically connected to at least one of:

a touch-sensitive portion of the one or more screens; and  
a mechanical button of the automatic teller machine.

12. (Currently Amended) A method of tracing bank notes, ~~the method~~ comprising the steps of:

receiving a deposit of an initial bank note;

extracting one or more initial images from the initial bank note;

attaching an initial transaction log to the one or more initial images;

receiving one or more ~~subsequent~~ images of a ~~subsequent~~ bank note substantially the same as the initial bank note that has been identified as a counterfeit bank note;  
[[and]]

comparing the one or more initial images of the initial bank note to the one or more ~~subsequent~~ images of the counterfeit bank note in order to obtain a comparison result; and

retrieving the initial transaction log based on the comparison result, if the comparison result indicates that the one or more initial images of the initial bank note and the one or more images of the counterfeit bank note are within a range of similarity.

13. (Canceled).

14. (Currently Amended) The method of Claim 12, wherein the step of extracting one or more initial images comprises:

extract a front side initial image of the initial bank note in a first initial position;

extract a front side initial image of the initial bank note in a second initial position;

extract a back side initial image of the initial bank note in a first initial position;

and

extract a back side initial image of the initial bank note in a second initial position.

15. (Currently Amended) The method of Claim 12, wherein the step of receiving one or more ~~subsequent~~ images of the counterfeit bank note comprises:  
receiving a deposit of ~~a subsequent~~ the counterfeit bank note; and  
extracting the one or more ~~subsequent~~ images from the ~~subsequent~~ counterfeit bank note.
16. (Currently Amended) The method of Claim 15, wherein the step of extracting one or more ~~subsequent~~ images of the counterfeit bank note comprises:  
extract a front side ~~subsequent~~ image of the counterfeit bank note in a first ~~subsequent~~ position;  
extract a front side ~~subsequent~~ image of the counterfeit bank note in a second ~~subsequent~~ position;  
extract a back side ~~subsequent~~ image of the counterfeit bank note in a first ~~subsequent~~ position; and  
extract a back side ~~subsequent~~ image of the counterfeit bank note in a second ~~subsequent~~ position.
17. (Currently Amended) The method of Claim 16, wherein the step of comparing comprises comparing each ~~subsequent~~ image of the counterfeit bank note in each ~~subsequent~~ position a plurality of times to a corresponding initial image of the initial bank note.
18. (Original) The method of Claim 12, wherein the one or more initial images include a unique characteristic that is specific to only one bank note, wherein the initial bank note is the only one bank note with the unique characteristic, wherein the unique characteristic includes other information besides a serial number of the initial bank note.
19. (Currently Amended) The method of Claim 13, wherein the step of comparing comprises:  
analyzing image characteristics using a Euclid distance formula; and  
determining that the one or more initial images of the initial bank note and the one or more ~~subsequent~~ images of the counterfeit bank note have a Euclid distance near zero, wherein the range of similarity includes having a Euclid distance near zero.

20. (Original) The method of Claim 12, wherein the steps of the method are stored on a computer-readable medium as one or more instructions for tracing bank notes, wherein the one or more instructions, when executed by one or more processors, cause the one or more processors to perform the steps of the method.